October 20, 2015

Micron's XTRMFlash(TM) Memory Breaks Through NOR Flash Speed Limits to Power Next-Gen, Instant-On Applications

Winbond Electronics First to Sign License Agreement to Develop XTRMFlash-Compatible Memory Devices

BOISE, Idaho, Oct. 20, 2015 (GLOBE NEWSWIRE) -- Micron Technology, Inc. (NASDAQ:MU), today announced XTRMFlash™ memory, a faster NOR flash solution designed to revolutionize the way the electronics industry develops systems to meet the demand for "instant-on" performance and fast system responsiveness in automotive, industrial and consumer applications.

Utilizing its new, low pin count interface that uses as little as 11 active signals, Micron's XTRMFlash memory outperforms other industry NOR Flash while also significantly reducing pin counts by as much as 75 percent from those found in Parallel NOR flash available in the market today. XTRMFlash memory provides system designers the ideal and fastest possible direct code execution NOR flash memory solution available to enable high-performance, yet small form-factor designs.

"Micron is committed to continued innovation in NOR flash memory," said Richard De Caro, director of NOR Flash for Micron's Embedded Business Unit. "We worked closely with our ecosystem partners and customers to understand their next-generation requirements for high-performance memory, and we have developed XTRMFlash memory as a result. XTRMFlash memory and the XTRMFlash interface have the potential to dramatically change the paradigm of the existing memory landscape by enabling a new category of high-performance and low pin count memory devices that can also extend beyond NOR Flash."

Micron fully intends for XTRMFlash memory and the interface to become widely adopted open standards, and as a testament to that effort and the XTRMFlash memory value proposition, flash memory provider Winbond Electronics has signed a license agreement to develop XTRMFlash-compatible solutions.

"Winbond is excited to join Micron with development of XTRMFlash-compatible solutions," stated Syed S. Hussain, director Flash Memory Marketing for Winbond Electronics Corporation America. "With Winbond providing compatible XTRMFlash solutions, customers will have the confidence and peace-of-mind to design-in XTRMFlash and support the new interface."

Performance that matters

Serial Peripheral Interface (SPI) NOR flash is used in a wide array of applications for boot code, program code, and data storage. Micron recognized the need for XTRMFlash memory to maintain backward compatibility to SPI NOR flash so that customers can upgrade their designs with relative ease. However, with random access times as fast as 83 nanoseconds (ns) and sequential byte reads as fast as 2.5ns, XTRMFlash memory offers dramatically better performance compared to traditional SPI and Quad-SPI NOR flash. Sustained read throughputs of 400 megabytes per second (MB/s) enables an entire 1-gigabit (Gb) XTRMFlash device to be read in a mere 0.3 seconds. With XTRMFlash memory's direct execute-in-place (XIP) operation and low pin count interface, valuable board space can be saved and the need for code shadowing can be eliminated.

"Micron XTRMFlash memory combines improved system responsiveness and reduced system cost, which is beneficial to applications requiring reliable fast starts and quick response across market segments, including the fast-growing Internet of Things space," said Steve Tateosian, director of Microcontroller Platforms for Freescale's Microcontroller group. "Freescale is again leading the way in bringing such innovations to our customers. We are already delivering built-in support for XTRMFlash memory in our Kinetis K8x ARM® Cortex®-M4 microcontroller series and expect this to be used in a number of our next-generation microcontrollers as well."

The Power of Partnerships

Micron is committed to enabling ecosystem support and multi-sourcing of XTRMFlash memory and the XTRMFlash interface through collaboration with chipset and memory solution vendors. In order to simplify system design and speed time-to-market, Micron has engaged with leading controller IP vendors Cadence Design Systems and Synopsis. Both companies have committed to support the high-performance and low pin count XTRMFlash interface as part of their controller IP portfolio. Cadence's Quad SPI IP is available now, while its Octal SPI IP, which supports the XTRMFlash interface, is in early customer

engagements. Synopsys' DesignWare® Synchronous Serial Interface IP, leveraging multi-lane (dual, quad, and octal) SPI for higher data-rate transfers, is available now.

"There is a growing demand for high-bandwidth NOR flash for applications with smaller storage size requirements," said Lou Ternullo, memory interface IP product line director for Cadence Design Systems, Inc. "We sell our Quad SPI IP to enable use of boot storage in enterprise and consumer applications, and are engaged with early customers to deploy our Octal SPI IP for low-power IoT devices."

"We collaborated closely with Micron to ensure seamless operation between Micron's XTRMFlash memory and Synopsys' DesignWare Synchronous Serial Interface IP," said Ed Bard, senior director of marketing, solutions group at Synopsys. "As a result, designers are already accelerating their time-to-market by integrating the silicon-proven DesignWare Synchronous Serial Interface IP into SoCs that implement the XTRMFlash memory in applications that require instant-on performance."

Micron's XTRMFlash product family offers a number of voltage, package, and density options in both industrial and automotive temperature grades. XTRMFlash memory densities range from 128 megabits (Mb) to 2Gb, and initial samples are available now.

About Micron:

Micron Technology, Inc. is a global leader in advanced semiconductor memory systems. Micron's broad portfolio of high-performance technologies—including DRAM, NAND and NOR Flash—is the basis for solid state drives, modules, multichip packages and other system solutions. Backed by more than 35 years of technology leadership, Micron's memory solutions portfolio enables the world's most innovative computing, consumer, enterprise storage, networking, mobile, embedded and automotive applications. Micron's common stock is traded on the NASDAQ under the MU symbol. To learn more about Micron Technology, Inc., visit www.micron.com.

CONTACT: PR Contact:

Greg Wood

Zeno Group for Micron Technology

650-801-7958

greg.wood@zenogroup.com

Source: Micron Technology, Inc.